

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No.: SCHUBBACH

In re Application of:)
R. SCHUBBACH & K. P. SCHMIDT)
Int. Appl. No.: PCT/EP2004/011914)
Int. Filing Date: October 21 2004)
For: METHOD FOR PRODUCING ELECTRO- STATICALLY NON-CHARGEABLE AND/OR) ELECTRIC CHARGE-DRAINING PLASTIC) CONTAINERS AND A PLASTIC) CONTAINER PRODUCED ACCORDING) TO THE METHOD))

FIRST PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

S I R:

Preliminary to the first Official Action in the above-entitled application, please amend the application as follows.

The Commissioner is hereby also authorized to charge any fees which may be required during the pendency of this application, including any patent application processing fees under 37 C.F.R. 1.17, and any filing fees under 37 C.F.R. 1.16, including presentation of extra claims, or credit any overpayment to Deposit Account No: 06-0502.

Please amend the above-entitled application as follows:

AMENDMENTS TO THE SPECIFICATION WITH MARKINGS TO SHOW CHANGES MADE

Change the title to read -- METHOD FOR PRODUCING ELECTROSTATICALLY NON-CHARGEABLE AND/OR ELECTRIC CHARGE-DRAINING PLASTIC CONTAINERS AND A PLASTIC CONTAINER PRODUCED ACCORDING TO THE METHOD --.

Before paragraph [0001], add the heading --BACKGROUND OF THE INVENTION--.

Before paragraph [0005], delete "State of the Art:"

Before paragraph [0011], delete "Disadvantages of the State of the Art:"

Before paragraph [0012], add the heading --SUMMARY OF THE INVENTION--.

Amend the following paragraphs:

[0013] -- This object is solved by in accordance with the invention ~~with the features of claim 1. According to the~~ by a method[[I,]] in which the permanently electrostatically non-chargeable or electric charge-draining properties of the exterior layer are adjusted by adding and admixing to the colorless plastic material of the exterior layer a limited quantity of a specific polymer-based compound, and the layer thickness of the exterior layer is made so thin, that the transparency or translucency of the compounded exterior layer is diminished not at all or only insignificantly, so that the fill level of a fluid filled in the container can be easily optically detected. The particular compound material is almost colorless or has only a very slight colorizing property. It is therefore a very significant advantage that the electric charge-draining or permanent antistatic exterior layer of the plastic container with a compounded antistatic master batch (Permastat material) can remain transparent or translucent, thereby obviating the need for incorporating an inspection strip. --.

[0021] -- [[Description:]] The plastic container according to the invention will now be explained and described in more detail with reference to an exemplary pallet container. The pallet container which can be used as a returnable container has an interchangeable, cuboid inner container made essentially of High Density Polyethylene (HDPE) with a front wall, a rear wall and two side walls, a bottom formed as a drain bottom, a top wall with a fill opening that can be closed by a screw cap, and a drain port disposed in the lower section of the front sidewall and having a drain fitting.--.

Before paragraph **[0029]**, add the heading --BRIEF DESCRIPTION OF THE DRAWING--.

Before paragraph **[0035]**, add the heading --DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS--.

Page 12, after the heading "CLAIMS" and before the first claim add --What is claimed is:--.

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES
MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

1.-13. (Canceled)

14. (New) A method for producing a multi-layer container of thermoplastic material by a blow-molding technique, for storing and transporting liquid fill material, said method comprising the steps of:

applying to the container an exterior layer incapable of permanently retaining an electrostatic charge by allowing electric charges to drain, and

adjusting a charge-retaining characteristic of the exterior layer by adding and admixing to the plastic material a limited quantity of a polymer-based compound and reducing a layer thickness of the compounded exterior layer so as to have a substantially unchanged transparency or translucency, thereby allowing easy optical detection of a fill level of the liquid fill material in the container.

15. (New) The method of claim 14, further comprising the steps of adding and admixing a limited quantity of color pigments to the plastic material of the exterior layer for coloring the plastic material of the exterior layer to allow visualization and evaluation of an area distribution and a layer thickness distribution of the exterior layer, while leaving the transparency or translucency substantially unchanged so as to allow easy optical detection of the fill level of the liquid fill material in the container.

16. (New) The method of claim 14, further comprising the steps of adding and admixing a limited quantity of optical brightening agents to the plastic material of the exterior layer, said optical brightening agents producing no recognizable coloration under ambient light, and illuminating the exterior layer with a wavelength other than ambient light to detect a response from optical brightening agents for visualization and evaluation of an area and layer thickness distribution of the exterior layer.

17. (New) The method of claim 14, wherein the exterior layer comprises a fusible, easily stretchable thermoplastic material selected from the group consisting of LLDPE (Linear Low Density PolyEthylene(New) and LDPE (Low Density PolyEthylene(New), and wherein at least one of a center layer and an interior layer of the multi-layer container comprises a cold-impact-resistant HDPE material (High Density PolyEthylene(New) with a high molecular weight.
18. (New) The method of claim 14, wherein the layer thickness of the exterior layer of the multi-layer container is adjusted to a thickness of approximately 0.25% to 5% of a wall thickness of the plastic container.
19. (New) The method of claim 14, wherein the multi-layer container is a pallet container having an average wall thickness of approximately 2 mm to 2.5 mm and a capacity of approximately 1000 liters, and wherein the thickness of the exterior layer is adjusted to approximately 0.05 mm to 0.2 mm.
20. (New) The method of claim 14, wherein the multi-layer container is adapted for storing and transporting flammable or potentially explosive fill materials.
21. (New) The method of claim 16, wherein the wavelength other than ambient light comprises black light.
22. (New) The method of claim 18, wherein the layer thickness of the exterior layer of the multi-layer container is adjusted to a thickness of approximately 2.0% of the wall thickness of the plastic container.
23. (New) The method of claim 18, wherein the thickness of the exterior layer is adjusted to approximately 0.1 mm.

24. (New) A container made of thermoplastic material by a blow-molding technique, for storing and transporting liquid fill material, comprising:
at least one gas-tight and fluid-tight closable fill and/or drain opening disposed in a top wall or in a cover of the container, and
an exterior layer incapable of permanently retaining an electrostatic charge by allowing electric charges to be drained, said exterior layer including a limited quantity of a polymer-based compound which does not or only insubstantially change a transparency or translucency of the external layer, allowing easy optical detection of a fill level of the liquid fill material in the container.
25. (New) The container of claim 24, wherein the exterior layer comprises a limited quantity of color pigments which slightly color the plastic material of the exterior layer, but allow visualization and evaluation of an area distribution and a layer thickness distribution of the exterior layer.
26. (New) The container of claim 24, wherein the exterior layer comprises a limited quantity of optical brightening agents, which produce no recognizable coloration under ambient light, but allow visualization and evaluation of an area distribution and a layer thickness distribution of the exterior layer under illumination with light having a wavelength other than ambient light.
27. (New) The container of claim 24, wherein a layer thickness of the exterior layer is adjusted to a thickness of approximately 0.25% to 5% of a wall thickness of the plastic container.
28. (New) The container of claim 24, wherein the multi-layer container is a pallet container having an average wall thickness of approximately 2 mm to 2.5 mm and a capacity of approximately 1000 liters, and wherein the thickness of the exterior layer is adjusted to approximately 0.05 mm to 0.2 mm.

29. (New) The container of claim 24, wherein the exterior layer comprises a fusible, easily stretchable thermoplastic material selected from the group consisting of LLDPE (Linear Low Density PolyEthylene(New)) and LDPE (Low Density PolyEthylene(New)), and wherein at least one of a center layer and an interior layer of the multi-layer container comprises a cold-impact-resistant HDPE material (High Density PolyEthylene(New)) with a high molecular weight.
30. (New) The container of claim 26, wherein the wavelength other than ambient light comprises black light.
31. (New) The container of claim 27, wherein the layer thickness of the exterior layer is adjusted to a thickness of approximately 2.0% of the wall thickness of the plastic container.
32. (New) The container of claim 28, wherein the thickness of the exterior layer is adjusted to approximately 0.1 mm.
33. (New) The container of claim 24, wherein the multi-layer container is a pallet container having a thin-wall cuboid interior container with a fill port in a top wall and a drain port on a lower side, and an extraction fitting made of a permanent antistatic or electric charge-draining plastic material and attached to the drain port.

REMARKS

This Amendment is submitted preliminary to the issuance of an Office Action in the present application.

Applicant has canceled original claims 1-13 in favor of new claims 14 to 33 which are intended to present claims in proper form and language and to remove any multiple dependency of the claims. Accordingly, applicant asserts that no claims have been narrowed to trigger prosecution history estoppel.

A substitute specification which includes all the foregoing changes to the specification (other than the claims) is enclosed herewith.

When the Examiner takes this application up for action, s/he is requested to take the foregoing into account.

Respectfully submitted,

By: 

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